

8:18 AM

Swap Displays Tips Exit Show

Phenotype vs. Genotype

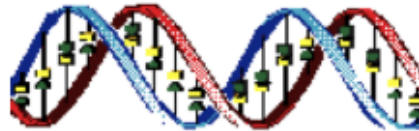
- Phenotype: the physical appearance of a plant or animal because of its genetic makeup (genotype)

the effect



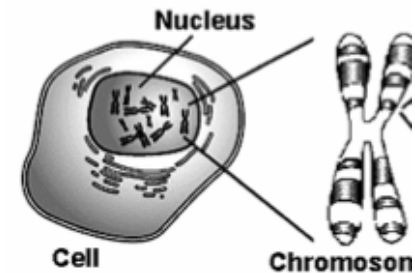
- Genotype: genetic constitution (makeup) of an individual

the cause



Ee

Genotype



Elapsed
0:00:5

Click to add meeting notes

8:21 AM

Swap Displays


Tips

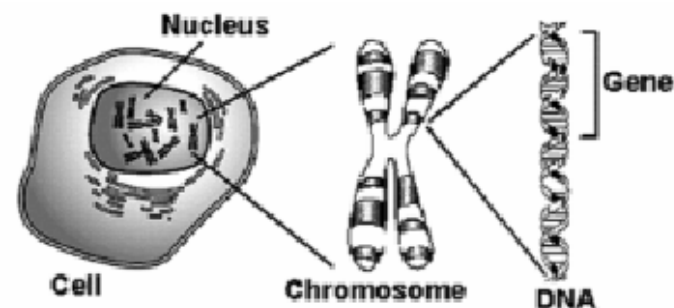
Exit Show

Genotype


Bb = genotype

**Each letter
is an allele..**

- Allele: a pair of genes located at the same place on a  chromosome



8:23 AM

 Swap Displays Tips Exit Show

Traits are controlled by genes


Cover up

- ★ Dominant genes: those that mask the presence of other **B** genes
- ★ Recessive genes: those whose physical expression (phenotype) is masked when in the presence of a dominant gene **b**

- Diploid organisms: always have two alleles, one on each chromosome of a homologous pair
- Example: the gene for green peas is dominant and the gene for yellow peas is recessive. A pea may have one allele for the expression of yellow color, but it also has an allele for green color. The peas will be green because green is dominant.

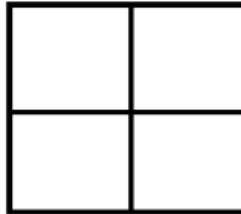


8:28 AM

 Swap Displays
 Tips
 Exit Show

The Punnett Square

- ★ A way for determining the ^{possible} genotype and phenotype of offspring
- Capital letters are assigned to dominant genes and lower-case letters are assigned to recessive genes



Heterozygous vs. Homozygous

- Heterozygous- when a plant or animal has two genes for different traits (example: tall and short)
- Homozygous- when a plant or animal has two genes for the same trait (example: two tall genes, or two short genes)

Elapsed
0:10:29

Click to add meeting notes

8:30 AM

Swap Displays Tips Exit Show

Heterozygous vs. Homozygous

Hybrid
Pure breed

- Heterozygous- when a plant or animal has two genes for different traits (example: tall and short) **Bb Tt Ee**
- Homozygous- when a plant or animal has two genes for the same trait (example: two tall genes, or two short genes) **EE tt bb**

same
BB

Using the Punnet Square

- Tall=T
- Short=t
- TT x tt

	T	T
t	Tt	Tt
t	Tt	Tt

 Elapsed
 0:12:41

Click to add meeting notes

8:37 AM

Swap Displays Tips Exit Show

Using the Punnet Square

- Tall=T
- Short=t
- $TT \times tt$

	T	T
t	Tt	Tt
t	Tt	Tt




Practice Using the Punnett Square

Elapsed
0:19:36

A

Click to add meeting notes

8:38 AM

 Swap Displays  Tips  Exit Show

Practice Using the Punnett Square



Practice Questions

- What would be the genotype of the offspring of a yellow pea (gg) with a green pea (Gg)?
- What would be the genotype of the offspring of a homozygous recessive yellow pea crossed with a homozygous dominant green pea?

Elapsed
0:20:48

A

Click to add meeting notes

A